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=> fil reg
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STRUCTURE FILE UPDATES:   12 OCT 2005  HIGHEST RN 865114-63-2
DICTIONARY FILE UPDATES:  12 OCT 2005  HIGHEST RN 865114-63-2

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*                                                                    *
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* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

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=> fil hcap
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FILE COVERS 1907 - 14 Oct 2005  VOL 143 ISS 17
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FILE LAST UPDATED: 13 Oct 2005 (20051013/ED)

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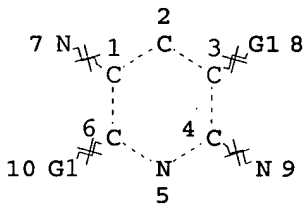
=> d que
L2 STR

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GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
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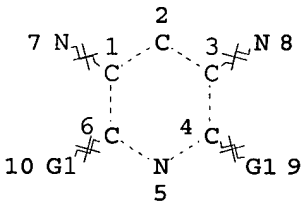


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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
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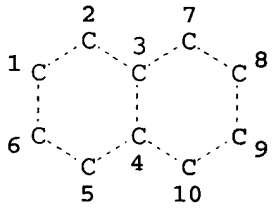

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L8 SCR 2043
L10 2 SEA FILE=REGISTRY SSS FUL L6 AND (L2 OR L3) AND L8
L11 3 SEA FILE=HCAPLUS L10

=> d l11 bib abs ind hitstr 1-3

L11 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1973:454044 HCAPLUS
DN 79:54044
TI Acid addition salts of 2,3,5,6-tetraaminopyridine
IN Gerber, Arthur H.
PA Horizons, Inc.
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 3740410 | A | 19730619 | US 1970-92154 | 19701123 |
| | US 3804804 | A | 19740416 | US 1971-151601 | 19710609 |
| | US 3838154 | A | 19740924 | US 1973-324282 | 19730117 |
| PRAI | US 1970-92154 | A | 19701123 | | |

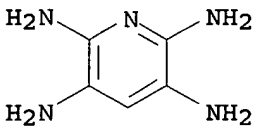
AB 2,6-Diamino-3,5-dinitropyridine (I) [34981-11-8] was prepared from 2,6-diaminopyridine (II), and was catalytically reduced to the 2,3,5,6-tetraaminopyridine (III) free base (and its acid salts), which were polym. to form thermally stable polymers. Thus, a mixt. of 250 cm3 H2SO4 and 54.5 g II at <25.deg. was blended with 30 cm3 H2SO4 and 76 g HNO3 during 2 hrs at 10 +-5.deg.. The soln. was

heated to 70.deg. during 45 min and heated at 75.deg. for 30 min to obtain 63 g I, which was dissolved (15 g) in 100 cm3 hot H3PO4-MeOH soln. The soln was cooled to 25.deg., diluted with 135 cm3 HCO2H (saturated with HCl) and 15 cm3 HCl, and mixed with 5% Pd/charcoal (2.88 g). The mixt was heated at 75.deg. and 55 psi H, filtered, and the filtrate added to a THF-HCl soln to ppt. the III HCl salt. A soln. contg. 333 g 116% deoxygenated polyphosphoric acid and 3.32 g III.HCl was heated at 75-80.deg. in N, blended with 4.05 g 1,4,5,8-naphthalenetetracarboxylic acid [128-97-2], and the mixt. heated 10 hr at 180.deg. to yield 3.4 g heterocyclic polymer, which required > 2 hr heating at 1000-1100.deg. in an open crucible for complete combustion.

IC C07D
INCL 260295000S
CC 35-2 (Synthetic High Polymers)
ST pyridine tetraamino naphthalenecarboxylic polymn; aminonitropyridine prepn aminopyridine
IT Heterocyclic compounds
RL: USES (Uses)
(polymers, from tetraaminopyridines and aromatic carboxylic compds.)
IT Heat-resistant materials
(tetraaminopyridine-aromatic polycarboxylic acid polymers)
IT **37367-58-1P** 41488-65-7P 91-19-0D, Quinoxaline, derivs., polymers
RL: PREP (Preparation)
(manuf. of thermally-stable)
IT 141-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration or chloroformylation of)
IT 4936-27-0P 34981-10-7P 34981-11-8P 37367-31-0P 37367-45-6P 37406-32-9P 37406-34-1P 38926-45-3P 39132-54-2P 39132-55-3P 39365-94-1P
RL: PREP (Preparation)
(prepn. of)
IT 541-41-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diaminopyridine)
IT **37367-58-1P**
RL: PREP (Preparation)
(manuf. of thermally-stable)
RN 37367-58-1 HCAPLUS
CN 1,4,5,8-Naphthalenetetracarboxylic acid, polymer with 2,3,5,6-pyridinetetramine trihydrochloride (9CI) (CA INDEX NAME)

CM 1

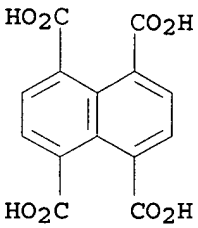
CRN 34981-10-7
CMF C5 H9 N5 . 3 Cl H



●3 HCl

CM 2

CRN 128-97-2
CMF C14 H8 O8



L11 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1973:125353 HCAPLUS
DN 78:125353
TI Heterocyclic polymers
IN Gerber, Arthur H.; Koch, Stanley D.; Adams, John S., Jr.
PA Horizons Research Inc.
SO Ger. Offen., 31 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| DE 2166070 | | 19721207 | | |
| CA 973554 | | | CA | |
| GB 1361840 | | | GB | |

PRAI US 1970-97419 19701230

AB 2,3,5,6-Tetraaminopyridine (I) [38926-45-3] optionally contg. another tetraamino compd. was reacted with a polycarboxylic acid, a benzoquinone, or an arom. diglyoxalyl compd. to form thermally stable heterocyclic polymers useful as fibers and films. Thus, 3.32 g I.3HCl was treated with 333 g 116% polyphosphoric acid at .sim.75.deg., and the mixt. was blended with 4.05 g 1,4,5,8-naphthalenetetracarboxylic acid. The soln. was heated 10 hr at 180.deg. to yield 2,3,5,6-tetraaminopyridine-1,4,5,8-

naphthalenetetracarboxylic acid copolymer [**38905-07-6**], polymer, which required >2 hr at 1000-1100.deg. to completely combust. I was prepd. by nitrating 2,6-diaminopyridine and then reducing the dinitro product.

IC C08G

CC 36-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 27

ST heterocyclic polymer aminopyridine; naphthalenecarboxylic acid heterocyclic polymer

IT Ring closure and formation
(in polymn. of aminopyridine with naphthalenetetracarboxylic acid)

IT Polymerization
(ring closure in, of aminopyridine with naphthalenetetracarboxylic acid)

IT 37367-31-0P 37367-45-6P **38905-07-6P** 41488-65-7P
41488-81-7P
RL: PREP (Preparation)
(manuf. of, cyclization in)

IT 141-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)

IT 4936-27-0P 34981-11-8P 37406-32-9P 37406-34-1P 38926-45-3P
39132-52-0P 39365-94-1P 41344-47-2P 41638-07-7P
RL: PREP (Preparation)
(prepn. of)

IT 124-63-0 541-41-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diaminopyridine)

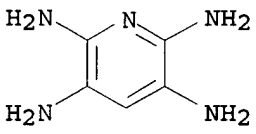
IT **38905-07-6P**
RL: PREP (Preparation)
(manuf. of, cyclization in)

RN 38905-07-6 HCAPLUS

CN 1,4,5,8-Naphthalenetetracarboxylic acid, polymer with 2,3,5,6-pyridinetetramine (9CI) (CA INDEX NAME)

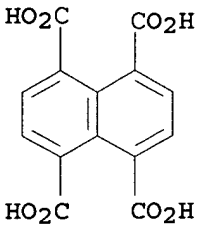
CM 1

CRN 38926-45-3
CMF C5 H9 N5



CM 2

CRN 128-97-2
CMF C14 H8 O8



L11 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1973:98276 HCAPLUS
DN 78:98276
TI Heterocyclic polymers
IN Gerber, Arthur H.; Koch, Stanley D.
PA Horizons Research, Inc.
SO Ger. Offen., 68 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | DE 2228067 | | 19721228 | | |
| | US 3804804 | | 19740000 | US | |
| | US 3838154 | | 19740000 | US | |
| PRAI | US 1971-151601 | | 19710609 | | |

AB Sol. polymers are prepd. from pyridine or bipyridine tetramines and arom. polycarboxylic acids,which are converted by heat to chem.- and heat-resistant products. Thus, heating 4.96 g 2,3,5,6-tetraaminopyridine trihydrochloride [34981-10-7] and 3.32 g isophthalic acid in 240 g 116% polyphosphoric acid 20 hr at 180.deg. gives 4.4 g isophthalic acid-2,3,5,6-tetraaminopyridine copolymer [39151-97-8]. The polymer is pptd. from H3PO4-HOAc by H2O and heated 4.5 hr at 220-5.deg. to give 3.1 g product showing wt. loss 3% at 500.deg..
IC C08G
CC 35-3 (Synthetic High Polymers)
Section cross-reference(s): 27
ST pyridine amino copolymer; tetraaminopyridine copolymer; isophthalic acid copolymer; benzimidazole deriv polymer; heat resistance polymer
IT Heat-resistant materials
(heterocyclic polymers, contg. tetraaminopyridine)
IT Adhesives
(hot-melt, acrylic polymer-epoxy compd. reaction products as thermally stable)
IT Epoxides
Epoxy resins
RL: USES (Uses)
(reaction products with acrylic polymers, for hot-melt adhesives)
IT 2-Propenamide, polymer with 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and 2-propenenitrile, reaction products with epoxy resins
2-Propenenitrile, polymer with 2-ethylhexyl 2-propenoate, methyl

2-methyl-2-propenoate and 2-propenamide, reaction products with epoxy resins
2-Propenenitrile, polymer with 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate, reaction products with epoxy resins
2-Propenoic acid, 2-ethylhexyl ester, polymer with methyl 2-methyl-2-propenoate, 2-propenamide and 2-propenenitrile, reaction products with epoxy resins
2-Propenoic acid, 2-ethylhexyl ester, polymer with methyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 2-propenenitrile, reaction products with epoxy resins
2-Propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with ethenylbenzene and oxiranylmethyl 2-methyl-2-propenoate, reaction products with epoxy resins
2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate, 2-propenamide and 2-propenenitrile, reaction products with epoxy resins
2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethylhexyl 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 2-propenenitrile, reaction products with epoxy resins
2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with 2-ethylhexyl 2-propenoate, methyl 2-methyl-2-propenoate and 2-propenenitrile, reaction products with epoxy resins
2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and 2-methylpropyl 2-methyl-2-propenoate, reaction products with epoxy resins
Benzene, ethenyl-, polymer with 2-methylpropyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate, reaction products with epoxy resins
Oxirane, (chloromethyl)-, polymer with 4,4'-(1-methylethylidene)bis[phenol], reaction products with acrylic polymers
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with acrylic polymers
RL: USES (Uses)
(adhesives, thermally stable hot-melt)

IT 51-17-2DP, 1H-Benzimidazole, derivs., polymers 91-19-0DP, Quinoxaline, derivs., polymers 37367-29-6P 37367-30-9P 37367-31-0P 37367-45-6P 37367-46-7P 37367-51-4P 37367-57-0P **37367-58-1P** 37367-60-5P 37367-62-7P 39955-70-9P
RL: IMF (Industrial manufacture); PREP (Preparation)
(heat-resistant, manuf. of)

IT 141-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)

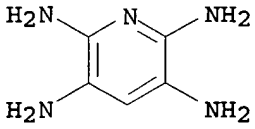
IT 4936-27-0P 34981-10-7P 34981-11-8P 37406-32-9P 37406-34-1P 38926-45-3P 39132-55-3P 39893-01-1P 39893-02-2P 39893-04-4P 39893-05-5P 40212-44-0P 40865-40-5P
RL: PREP (Preparation)
(prepn. of)

IT **37367-58-1P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(heat-resistant, manuf. of)

RN 37367-58-1 HCAPLUS
CN 1,4,5,8-Naphthalenetetracarboxylic acid, polymer with 2,3,5,6-pyridinetetramine trihydrochloride (9CI) (CA INDEX NAME)

CM 1

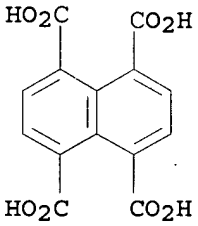
CRN 34981-10-7
CMF C5 H9 N5 . 3 Cl H



●3 HCl

CM 2

CRN 128-97-2
CMF C14 H8 O8



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